The following occultations were observed, using a power of about 85:

S. D. $-8°$ 5994.	Disappearance,	$9^h\ 39^m\ 16^s.0$ P. S. T.
$11\pm$ mag. star.	"	$9^h\ 56^m\ 03^s.0$
$11\pm$ mag. star.	"	$9^h\ 57^m\ 08^s.0$
S. D. $-8°$ 5996.	"	$9^h\ 58^m\ 05^s.5$
A star of $11\pm$ mag.	"	$10^h\ 04^m\ 23^s.7$
S. D. $-7°$ 5900.	"	$10^h\ 09^m\ 37^s.9$
12 to 13 mag. star.	"	$10^h\ 18^m\ 34^s\pm 1^s.$
S. D. $-7°$ 5907.	"	$10^h\ 50^m\ 21^s\pm 1^s.$

Soon after totality commenced, I turned the telescope to the place of SWIFT's comet, but, as it was near the horizon, failed to see it. Just before totality ended, I again turned to the comet's place, and this time found it without difficulty. There was not sufficient time to adjust the micrometer and make an observation.

Its light was about the same as during the latter part of August, but its centre seemed a little more condensed.

C. D. PERRINE.

LICK OBSERVATORY,
September 25, 1895.

TOTAL ECLIPSE OF THE MOON, SEPTEMBER 3, 1895.

The total eclipse of the Moon was observed with a three-inch telescope with alt-azimuth mounting, and the times of contact were noted by a mean time chronometer. The first contact was not observed, and the last contact was observed with the naked eye.

The occultation of several stars was noted, but only one star was bright enough to be well observed.

Fifteen minutes after totality began, all the more prominent features of the Moon's surface could be distinguished easily in the telescope, and even in the middle of the eclipse *Tycho* and a few other craters could be seen clearly. To the naked eye, the contrast between the light and dark areas was well marked throughout the eclipse, the color varying from orange-red to a deep copper-red.

The following edge of the shadow was heavier and more sharply defined than the preceding.

The star occulted was estimated at 9.5 magnitude, in position angle 95° with reference to the Moon's centre. The star was

BD. -8°, 5996 (8.7 mag.). The time of dissappearance was $9^{h}\ 57^{m}\ 58^{s}.3$ P. S. T.

Beginning of totality,	$9^{h}\ 6^{m}\ 28^{s}$ P. S. T.
End of totality,	$10^{h}\ 47^{m}\ 35^{s}$
Last contact with shadow,	$11^{h}\ 54^{m}\ 00^{s}$

R. G. AITKEN.

LICK OBSERVATORY,
September 4, 1895.

LUNAR ECLIPSE, SEPTEMBER 3, 1895.

Beginning of totality, $9^{h}\ 6^{m}\ 35^{s}$ P. S. T.
End of totality, $10^{h}\ 47^{m}\ 20^{s}$.
Observations made without telescopic aid.

W. W. CAMPBELL.

NOTE ON THE MELTING OF THE POLAR CAPS OF *MARS*.

I suppose no fact concerning *Mars* has been better established than the one that the polar caps continue to decrease in size after the summer solstice on the planet has passed. The statement has recently been made, both in an astronomical journal and in the secular press, that the continued diminution of the cap after solstice proves that the maximum temperature on the planet occurs several months after summer solstice, and, therefore, that *Mars* has a "heat-storing atmosphere."

I believe that astronomers have always considered that *Mars* has *some* atmosphere, that the more or less extensive atmosphere is necessarily "heat-storing," and that the maximum temperature necessarily, therefore, occurs some time after summer solstice. But does the continued melting of the caps after solstice prove it? I think not.

Suppose that a given area A of a cap melts off before solstice, leaving a remnant of area B covering the polar region. The area B receives the same amount of direct solar heat before solstice that it does after. If this heat had no effect upon the area B until after summer solstice, then the point would be well taken. But such is not the case. There is abundant positive proof that extensive melting of the area B does occur before solstice; and that it should continue to melt after solstice does not prove that the maximum temperature occurs then, since the same amount of direct solar heat is received after solstice as before.